

STRI news '98

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TUPPER CENTER SEMINAR

The seminar scheduled for Tue, Jan 13, by Beth Capaldi, of the University of Illinois, has been cancelled. If you wish to give a seminar, please contact Audrey Smith at Tupper, ext. 2212 or at Ancon, ext. 4100.

BAMBI SEMINAR AT BCI

Thu, Jan 8, Bambi seminar speaker will be Bret Weinstein, University of Michigan *Tent-Making Fruit Bats of BCI: Observations Above Light and Beyond Sound*. Transportation and dinner reservations are essential. Please call BCI at 272-2124. The new Bambi "Jefe" is Steve Yanoviak, from the University of Oklahoma.

NAOS LUNCHEON SEMINAR

Jan 9, Naos Marine Labs Luncheon seminar speaker will be Heidi Banford, The College of William and Mary, Virginia *Piscine Adventures in West Africa*

For more information about the Naos Luncheon seminars, please contact Bailey Keissing at Naos, ext. 3330 or consult the Web at http://160.111.136.12/Naos_Luncheon_Schedule.html

PEOPLE

Arrivals

- Betsy Arnold, University of Arizona, Dec 28 - Jan 12, to continue collaborative work with Allen Herre and Jennifer Davidson, at BCI.
- Joseph Holtum, University of Townsville, Jan 9 - Feb 9, to study the physiology of tropical plants, at Tupper.
- Jonathan Todd, Jan 9 - Feb 2, to conduct research in Bocas del Toro. He will be stationed at Ancón.
- Hiro Matsuoka and Masahiro Hayakawa, Shimokita Peninsular Japanese Macaques Research Committee of Japan, Jan 10-15, to conduct research on primates, at BCI.



Nimia Gómez (right) was honored by the Cámara Junior de Panamá as one of eight '97 outstanding young professionals. She won the category of "Scientific or Technological Development" for her research at STRI, under the leadership of Biff Bermingham. In the photo, Gómez receives the award during a ceremony held at the Hotel El Panamá, on Dec 11
••• *Nimia Gómez (derecha) fue escogida como uno de los ocho Jóvenes Sobresalientes de 1997 en la categoría de Desarrollo Científico o Tecnológico, por sus investigaciones en STRI, bajo el liderazgo de Biff Bermingham. En la foto, Gómez recibe el premio, durante una ceremonia llevada a cabo en el Hotel El Panamá, el 11 de diciembre.* (Foto: cortesía de la Cámara Junior)

- Peter Jung, Jan 10-19, to work on research projects with Tony Coates and Jeremy Jackson, in Bocas del Toro.
- Reginald Cocroft, STRI post-doctoral fellow from Cornell University, Jan 10 - Jan 31, 1999, to study the role of communication in social behavior signals and responses in group-living insects, in Gamboa.
- Samantha Austin, University of California, Jan 11 - Apr 19, to work with Christina Campbell on the reproductive biology of the blackhanded spider monkey *Ateles geffroyi*; and to attend a field course by Katherine Milton, on the population dynamics of howler monkeys.
- Gerold Schmidt, University of Würzburg, Jan 12 - Jul 31, to study the size related ecophysical changes in tropical epiphytes, at BCI.
- Christian Ziegler, University of Würzburg, Jan 12 - Mar 20, to work with Gerold Schmidt, at BCI.
- Jennifer Johns and David Gutterman, Rodgers University, Jan 12 - Jan 8, 1999, to work on the pollination in fragments: the reproductive fate of four neotropical tree species, at BCI.

- Ana María Ford, STRI D.C., Jan 15-27, to assist during the visit of nature photographer Art Wolfe, who will get photos of scientific projects in Panama.
- Allison Dwileski, Long Island University, Jan 15 - Nov 30, to work on a determination of the factors responsible for the zonation patterns of *Echinometra lucunter* and *Echinometra viridis*, in San Blas.
- Manuel Velez, University of Florida, Jan 15 - May 15, to work on the project: Does male desertion represent a reproductive conflict in the cichlid *Aequidens coreruleopunctatus*, in Gamboa.

Departures

- Nancy Knowlton, Jan 12-18, to Chicago, to meet with colleagues, and to Uppsala, Sweden, to serve in a search committee at the Uppsala Universitet.
- Ross Robertson, Jan 14 - Feb 27, to Easter Island, Chile, to do research on fishes; then to Australia, on vacation.

More 10-Year Pins in '97 • Más Condecoraciones en el '97
Fernando Pascal and Ana Luisa De la Espada also received their 10-years of service pins last year. Pascal started working for STRI in 1985 and De La Espada started in 1987. Our congratulations ••• *Fernando Pascal y Ana Luisa De La Espada también recibieron condecoraciones por diez años de servicio en 1997. Pascal empezó a trabajar en STRI en 1985 y De La Espada en 1987. Nuestras felicitaciones.*

Congratulations ••• Felicitaciones

- To Biff Bermingham and Chimène Longwater, for the birth of their son Samuel, on Thu, Dec 25 ••• *A Biff Bermingham y a Chimène Longwater, por el nacimiento de su hijo Samuel, el jueves 25 de diciembre.*
- To César and Xiomara Ulloa, for the birth of their daughter Celín Mariel, on Thu, Dec 31 ••• *A César y Xiomara Ulloa, por el nacimiento de su hija Celín Mariel, el día jueves 31 de diciembre.*

FROM SCIENTIFIC SUPPORT SERVICES ••• DE LA OFICINA DE APOYO CIENTIFICO

Free-Air Carbon Dioxide Enrichment Ring in Panama

STRI has been funded by the Department of Energy to build and test-run a prototype Free-Air Carbon Dioxide (CO₂) Enrichment (FACE) ring in Panama, in an 18-month feasibility study. It is the first step towards establishing the third site in a proposed six-site experiment entitled Forest-Atmosphere Carbon Transfer and Storage (FACTS-III) and the first site in the tropics.

The goal of FACE research is to lay the scientific foundations for understanding the consequences of future emissions of CO₂. FACE rings release CO₂-enriched air from a circular set of vent pipes. The computer-controlled systems use feedback technology to adjust the CO₂ release in order to maintain stable, elevated concentrations of CO₂. FACE technology avoids the interference that has confounded experiments performed in chambers.

Locating FACTS-III in Panama is considered desirable because of the long-term infrastructural and scientific support provided by STRI as well as the very large database on tropical forest structure, dynamics and ecophysiology accumulated in Panama, particularly BCI. This project represents an international collaboration between scientists at four principal institutions: Princeton University, Brookhaven National Laboratory, USA; McGill University, Canada; and the Smithsonian Tropical Research Institute, Panamá. We anticipate participation from scientists at several additional institutions, including two Panamanian universities.

Harry Barnes

Anillo para Aumentar Dióxido de Carbono

El Departamento de Energía de los Estados Unidos aprobó los fondos para que STRI construya y pruebe un anillo prototipo para aumentar el CO₂ al aire libre (FACE), en Panamá, luego de un estudio de factibilidad de 18 meses de duración. Este prototipo sería el tercero del experimento "Almacenamiento y Transferencia de Carbono Bosque-Atmósfera" que propone seis estaciones, siendo ésta la primera en los trópicos (FACTS III).

El objetivo de las investigaciones FACE es establecer las bases para el entendimiento de las consecuencias de futuras emisiones de CO₂. Los anillos FACE liberan aire enriquecido en CO₂ a través de un juego de ventiladores. Los sistemas, controlados a través de computadoras, utilizan apoyo tecnológico para ajustar la liberación del CO₂ y mantener estables las altas concentraciones. La tecnología FACE evita la interferencia que ha alterado los resultados de experimentos de este tipo llevados a cabo en cámaras cerradas.

El establecimiento de FACTS III en Panamá es de gran importancia, considerando el apoyo científico y de largo plazo que brinda STRI, así como por la extensa base de datos que ha acumulado sobre la estructura, dinámica y ecofisiología de los bosques tropicales en Panamá, especialmente en BCI. Este proyecto es producto de la colaboración internacional entre científicos de cuatro instituciones principales: la Universidad de Princeton y el Laboratorio Nacional de Brookhaven Estados Unidos; la Universidad de McGill, en Canadá; STRI, en Panamá. También se anticipa la futura colaboración de científicos de diversas instituciones, incluyendo dos universidades panameñas.

Harry Barnes

ANNOUNCEMENTS

Mini-Symposium on Interactions

You can talk about the weather: but unless you are willing to flood a forest, or set up grow lights above it, there is not much you can do about it!

However... you can improve your interactions! Building on the success of the STRI "Mini" Symposium on Seasonality, We announce a successor: STRI Mini Symposium on Interactions. If you study: behavioral, physiological, chemical, genetic, phylogenetic, or "other" aspects of species interactions (be they two or more), and you would like to give a brief summary of what you do and what you have been finding, and are likely to be here during the second or third week in March, please respond with a possible title, and a preferred set of dates. Or if you simply have an itch to know, let one of us know! *Allen Herre*

"Panama: Coral Reefs and Forests"

From Dec 30 to Jan 5, a group of the Smithsonian Associates toured Panama. The tour, *Panama: Coral Reefs and Forests* was promoted by the Smithsonian Associates Study Tours in Washington. Fifty associates joined the tour, whose study leader was Stanley Heckadon. This is the first time that such a tour is organized for the specific purpose of visiting Panama as a cultural and natural destination.

The visitors embarked in Cristóbal, in the *Temptress Voyager*, stopping at Portobelo, Kuna villages of San Blas, the forest of Ft. Sherman, crossing the Canal, later the Pearl Islands, and Chunga, an Emberá village in the Sambú River, Darién. The tour ended in Panama city, visiting Old Panamá, the "Casco Viejo" and STRI facilities, where Ira Rubinoff, Georgina de Alba and Joe Wright briefed them on STRI's research activities. They visited Parque Nacional Soberanía and BCI, where they were briefed by Oris Acevedo and Elisabeth Kalko, and the Culebra Marine Exhibit Center, where Haris Lessios and Juan Maté talked about marine research.



Electronic engineer Julia Areas, was selected among 15 finalists for the position of administrative and field assistant, in support of the Security Office. Areas is a graduate student of Higher Management at USMA, and before coming to STRI, she was working in Grupo Informática, S.A. With her in the photo is Alejandro Arze, Security Manager at STRI ••• Julia Areas, ingeniera electrónica, fue elegida entre 15 finalistas para la nueva posición de asistente administrativa y de campo, en la Oficina de Seguridad. Areas estudia un postgrado de Alta Gerencia en la USMA, y antes de venir a STRI, trabajaba en Grupo Informática, S.A. Con ella en la foto aparece Alejandro Arze, Director de Seguridad de STRI.

(Foto: M.A. Guerra)

NEW STRI PUBLICATIONS

- Dalling, James W., Swaine, M.D. and Garwood, Nancy C. 1997. "Soil Seed Bank Community Dynamics in Seasonally Moist Lowland Tropical Forest, Panama." *Journal of Tropical Ecology* 13(5): 659-680.
- Glynn, Peter W. and Maté, Juan L. 1997. "Field Guide to the Pacific Reefs of Panamá." In: *Proceedings of the 8th International Coral Reef Symposium, Panama, June 24-29, 1996*: 1: 145-166, edited by H.A. Lessios and Ian G. Macintyre. Panamá, STRI.
- King, D.A., Leigh Jr., Egbert Giles, Condit, Richard, Foster, Robin B., Hubbell, Stephen P. 1997. "Relationships Between Branch Spacing, Growth Rate and Light in Tropical forest Saplings." *Functional Ecology* 11(5): 627-635.
- Meinzer, F.C., Andrade, José L., Goldstein, Guillermo, Holbrook, N.M., Cavellier, Jaime and Jackson, P. 1997. "Control of Transpiration from the Upper Canopy of a Tropical Forest: the Role of Stomatal, Boundary Layer and Hydraulic architecture Components." *Plant Cell and Environment* 20: 1242-1252.

A Message from Gloria Maggiori ••• *Un Mensaje de Gloria Maggiori*

"Imagine there is a bank which credits your account each morning with \$86,400, carries over no balance from day to day, allows you to keep no cash balance, and every evening cancels whatever part of the amount you had failed to use during the day. What would you do? Draw out every cent, of course! Well, everyone has such a bank. Its name is Time. Every morning, it credits you with 86,400 seconds. Every night it writes off as lost whatever of this you have failed to invest to good purpose. It carries over no balance. It allows no overdraft. Each day it opens a new account for you. Each night it burns the records of the day. If you fail to use the day's deposits, the loss is yours.

There is no going back. There is no drawing against the "tomorrow." You must live in the present on today's deposits. Invest it so as to get from it the utmost in health, happiness and success! The clock is running. Make the most of today!

- To realize the value of one year... ask a student who has failed his final exam.
- To realize the value of one month... ask a mother who has given birth to a pre-mature baby.
- To realize the value of one week... ask an editor of a weekly newspaper.
- To realize the value of one day... ask a daily wage laborer who has ten kids to feed.
- To realize the value of one hour... ask the lovers who are waiting to meet.
- To realize the value of one minute... ask the person who has just missed the train.
- To realize the value of one second... ask the person who has survived an accident.
- To realize the value of one milli-second... ask the person who has won a silver medal in the Olympics.

Treasure every moment that you have! And treasure it more because you shared it with someone special... special enough to have some of your time!!! So tell me... What are you going to do with your 86,400 seconds???"

Author Unknown

"Imagine que hay un banco que acredita a su cuenta todas las mañanas \$86,400, no pasa el balance de día a día, no le permite un saldo de efectivo, y cada noche le cancela todo lo que no usó durante el día. ¿Qué haría usted? Sacar cada centavo, ¡por supuesto! Pues bien, todo el mundo tiene un banco así. Se llama Tiempo. Cada mañana le acredita 86,400 segundos. Cada noche asume como pérdida todo lo que no ha invertido en una buena causa. No lleva el balance para el día siguiente. No se puede sobregirar. Cada día abre una nueva cuenta para usted. Cada noche quema los registros de ese día. Si usted no usa el depósito del día, la pérdida es suya.

No hay vuelta atrás. No se puede girar contra el "mañana". Usted debe vivir en el presente con el depósito de hoy. ¡Invierta de manera que pueda obtener la mayor salud, felicidad y éxito! El reloj está corriendo. ¡Haga de hoy lo mejor!

- Para entender el valor de un año... pregúntele a un estudiante que fracasó sus exámenes finales.
- Para entender el valor de un mes... pregúntele a una madre que dio a luz un niño prematuro.
- Para entender el valor de una semana... pregúntele a un editor de un periódico semanal.
- Para entender el valor de un día... pregúntele a un obrero que cobra por día y alimenta a 10 hijos.
- Para entender el valor de una hora... pregúntele a los amantes que esperan encontrarse.
- Para entender el valor de un minuto, pregúntele a alguien que acaba de perder el tren.
- Para entender el valor de un segundo, pregúntele a alguien que acaba de sobrevivir en un accidente.
- Para entender el valor de un mili-segundo... pregúntele a alguien que ganó la medalla de plata en las Olimpiadas.

Atesore cada momento que tiene. Y atesórelo más porque lo compartió con alguien especial... suficientemente especial para recibir algo de su tiempo!!! Así que dígame... ¿qué va a hacer con sus 86,400 segundos???"

Autor Desconocido